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Risk Management Issues for Small Farms within Local Food Systems

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Recently, there has been substantial growth in the United States' local food system (LFS). Data from the 2002 and 2007 Census of Agriculture indicated a 17% increase in the number of farms selling directly to consumers, from 116,733 to 136,817 (U.S. Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), 2007). Nationally, small farms—defined as those with less than \$250,000 in annual sales—accounted for 57% of direct-to-consumer sales. Based on the 2007 census, farms with less than 100 acres accounted for approximately 44%—\$528 million—of direct-to-consumer sales. This suggests smaller producers are actively participating in local food systems, and it raises questions about potential growth opportunities for small farms in those systems. To successfully capitalize on these opportunities, farmers must first fully understand the types of risks—production, marketing, financial, legal, and human—that threaten their farming operations in order to implement the appropriate strategies to mitigate risks' impacts.

This article focuses on relatively small operations in the LFS primarily because of their limited adoption and implementation of existing risk management strategies given the challenges they face to be profitable. Farms with greater access to resources are better capable of adopting and implementing current risk management strategies and using existing tools in their operations. Because smaller farms account for a significant portion of total farms involved in the local food system, it is essential to address their risk management needs to strengthen the system. We recognize that there are a host of risk management options available; however, the purpose of this article is to highlight and provide an overview of risks faced by small farmers as well as

discuss some of the most successful strategies available to manage risks among those interested and engaged in serving local food systems.

Risk Management

Risk is prevalent in agriculture and despite widespread use of risk management strategies there is need for continued outreach and research to further mitigate its effects (Hardaker, et al. 2004). Risk management deals with selecting the appropriate mix of alternative strategies to reduce risks within the farm's operation, transfer risks from the operation to others more capable of handling risk exposure, or build the operation's capacity to bear risks (Harwood, et al. 1999). The article addresses five prominent areas of risks: production, marketing, financial, legal, and human risks (RMA 1997). While there is no single best risk management strategy for an operation, some strategies are more appropriate and cost-effective for relatively smaller producers participating in the local food systems.

Production Risk: Production risk involves all activities that affect the quantity and quality of production, including the effects of weather, pest, diseases, and other factors. The effects of weather, pests, and diseases on production have been discussed for years (Schickele, 1949; Hansen, et al. 1999; Collier, et al. 2008); risk management strategies to deal with such risks range from diversifying crops to adopting new technology. More recently, there has been an increase in the use of cost-effective strategies to reduce production risks that are more appropriate for local producers. These strategies primarily involve season extension technology for crop production and the use of crop insurance.

Season extending strategies are ideal for local producers who must supply fresh, high quality produce on a consistent basis. Season extending technologies used by local producers include mulches, row covers, low and high tunnels, and greenhouses. Although all techniques are used for the same purpose, the technologies offer varying degrees of risk mitigation. Currently, the high tunnel is a popular strategy because of cost and returns as well as the flexibility to produce diverse crops for extended periods. A high tunnel is a polyethylene-covered structure with relatively low input for environmental control. The cost and returns of a high tunnel structure are determined by several factors including its size, type of crops grown and variable costs—plants, fertilizer, and irrigation, among others. Budgets are used to evaluate the profitability of these structures for various crops.

Acquiring crop insurance is another method of controlling production risks. The government provides federally subsidized insurance for specialty crops—which includes fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops—managed and administered by USDA Risk Management Agency. However, these particular crops represent a relatively small percentage of the total liability coverage of insured crops in the U.S. Relatively lower production volumes and production of a vastly diversified crop mix creates a hurdle for small-sized operations to effectively utilize specialty crop insurance. One product suitable for highly diversified specialty-crop farmers of varying sizes is whole-farm revenue insurance. There are two types of whole-farm revenue insurance, Adjusted Gross Revenue (AGR) and AGR-Lite, available for this group of farmers.

Marketing Risk: Marketing is a vital part of the farming operation that transforms production into financial success. Therefore, selecting the appropriate marketing channel

is essential as this will have a tremendous impact on the farm's profitability. Although there are a wide variety of marketing outlets available for LFS marketers, the options available for the relatively smaller farms are limited. For instance, small producers may not be able to utilize wholesale outlets or some intermediate outlets due to the volume of products required or processing and packaging specifications. As a result, relatively smaller producers typically utilize direct-to-consumer markets. Direct-to-consumer markets have experienced rapid growth in recent years. Increasing numbers of intermediate outlets—restaurants, grocery stores, and regional distributors—are also demanding more local food. While many mid-sized and large-scale producers are creating innovative strategies to capture this market, many small producers struggle to find consistent success. Access to infrastructure, particularly aggregation and processing facilities, could bridge the gap between small producers and these larger markets. Expanding the infrastructure capacity for delivering products through local food systems would provide smaller producers a stable and more consistent market and could serve as an effective marketing risk management strategy.

Recently, there has been an increase in the number of aggregated infrastructures, more specifically food hubs. A food hub is a business or organization that actively coordinates aggregation, storage, distribution, and marketing of locally or regionally produced food to strengthen small producers' abilities to satisfy wholesale, retail, and institutional demands (Matson and Thayer, 2013). By aggregating the products of many individual farmers and providing economies of scale, food hubs help small producers reach a wider range of markets, including large regional buyers. Based on the USDA Agricultural Marketing Service (AMS) working list of food hubs, there are a total

of 237 across the United States as of July 1, 2013.

Financial Risk: Financial risk covers any risks that directly threaten the farm's financial health. One source of financial risk that is common among small producers is the cost and availability of financing options, capital loans, and operating loans. Unlike smaller producers, larger farmers are usually more likely to possess collateral, and required detailed financial and performance records lending institutions need to evaluate their credit risk. Additionally, the process and cost of obtaining a loan are relatively higher for small farmers, which present an application hurdle. Another hurdle is the limited capacity for financial institutions to evaluate the repayment capacity of these small, diversified, niche market operations. Recent benchmark studies have aided financial institutions' understanding of small, diversified operations but expertise is still somewhat limited. Although financing options are limited, it is important for local producers to understand the options available and their requirements to be able to select the best fit for their farm and their financial capabilities.

Loans offered by commercial banks and financial institutions include funds for financing crop and livestock production expenses, purchasing equipment, purchasing land for the purpose of farming, as well as for breeding livestock. Many commercial banks also participate in USDA Farm Service Agency (FSA) guaranteed loan programs, providing additional opportunities for making and servicing agricultural loans. FSA recently began offering a micro-loan program—direct farm operating loans with shortened applications and reduced paperwork designed to meet the needs of smaller growers.

Legal Risk: Legal risks result from uncertainties that threaten the legal standing of the farm or put the farmer in legal jeopardy. Local producers

should implement risk management strategies to reduce the number of potential legal disputes, or reduce or transfer the costs associated with these risks. Legal implications can arise from many sources but three main areas involve labor issues, market contracts, and food safety issues.

Because of the labor-intensive nature of agriculture, the U.S. Department of Labor (DOL) has several labor laws to protect employees. Common requirements include registering with DOL, ensuring no illegal alien is employed by the operation, keeping detailed up-to-date records for each employee, visibly displaying posters of specific Acts or laws for all employees, and providing each employee written documents detailing all conditions of employment.

An increasingly important aspect of agricultural production and marketing that can serve as a risk management strategy is the use of contracts. Production and marketing contracts provide several benefits to small producers including access to technology, a guaranteed market, and a more stable income. However, the language of the contract, legal issues and obligations established, and the nature of the relationship created between the producer and the contractor or buyer determines the risk strategy of the contract; risk sharing or risk shifting. Therefore, it is essential for producers to carefully assess the terms of a contract before signing, and once signed, they must adhere to the terms to avoid legal ramifications.

Compliance with good agricultural practices (GAP) and food safety laws is crucial to reducing legal risk related to consumers. The recently passed Food Safety Modernization Act (FSMA) elevated food safety processes from an industry standard to regulatory compliance. At writing of this article, the final regulations are still being finalized. While the new law contains exemptions for “small” farmers, FSMA will

require heightened scrutiny and documentation in the local food system environments.

Use of insurance products is a basic strategy for farmers to transfer or limit risk exposure. Therefore, it is important for producers to maintain adequate liability insurance for their businesses. Typically, local producers are required to have a minimum of \$1 million of product liability coverage, which is a prerequisite to sell to intermediate markets. Insurance considerations are a critical area for LFS farmers to consider given their exposure to many buyers.

Human risk: Labor makes up the largest cost associated with producing and harvesting most agricultural crops and accounts for about 50% of the food marketing bill (Fields, 2008). As a result, finding ways to reduce labor costs are an ongoing challenge for producers. Hired farmworkers play an integral role in U.S. agriculture, although there has been a steady decline over the last decade, from about 3.4 million to just over 1 million jobs—including part-time and full-time (USDA/NASS, 2007). Farm Labor Survey statistics show that a majority of farmworkers are found on the largest farms, with sales over \$500,000 per year. Both the quantity and quality of available labor are two significant human risk issues for small producers in the local food system. Given the relatively increased incidence of hand-harvested specialty crops being marketed through these local systems, attention to labor management becomes critical to small growers who want to access these markets effectively.

The shortage of skilled labor is forcing producers of all sizes to explore creative ways to secure quality labor but, given their resource constraints, this issue is magnified for small farmers. Based on a case study conducted in California, farmers often use other methods beyond compensation to enhance employee

satisfaction and productivity including respect and recognition (National Center for Appropriate Technology & California Institute for Rural Studies, 2010). This requires effective communication and building relationships with employees to understand their motivations and then finding appropriate compensation that result in increased employee and operational efficiencies. Applying this strategy to small farms could reduce the costs associated with labor.

Implications

The number of small farms participating in the LFS is steadily increasing. However, these producers continue to encounter business uncertainties and risk management issues that are difficult to overcome given their size and financial capabilities. Thus, continued research and extension efforts to develop innovative, cost-effective risk management strategies applicable for small-sized operations could further aid expansion of local food systems. Although some financial benchmark studies have been done on different risk management areas, very little has taken different scales of operations into consideration and especially so for smaller operations. Hence, the need to continuously explore and evaluate different strategies to successfully finance producers focused on serving LFS to aid this growing segment of the market. Additional advances in acceptable protocols for transparent effective food safety systems would aid both grower and consumer food safety concerns. Expanded public and private partnerships to facilitate the development of infrastructure must be created to alleviate a number of the supply chain and efficiency questions that stymie growth in these local systems.

These partnerships can leverage some of the available grant programs—such as value added producer grants, and the USDA Specialty

Crop Block Grants to the states the Sustainable Agriculture Research and Education and Extension Risk Management Education grants program—to enhance the development of these local food marketing outlets for small farmers.

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